

ROBUST HIGH QUALITY FLOW MONITORS

1 Setpoint Contact
Longlife



Mechanical Flow Switch for Liquids



Our flow switch SP-G is designed to fit small flow and line sizes. It works on the principle of variable flow area where the alarm switch point can be set at a very low flow and still the switch is capable of handling large flows without creating a large pressure drop.

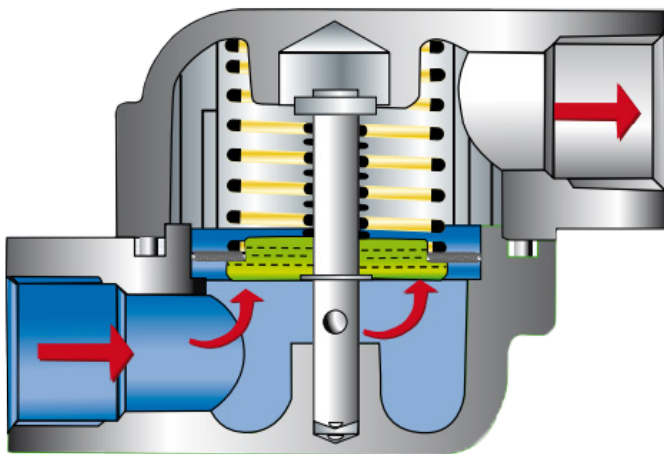
SP-G comes in dimensions DN15 and DN20. You have the possibility to choose the set point from 1,5 l/min up to 30 l/min. The set point is calibrated from factory but can be changed by exchanging the pressure plate.

SP-G has a mechanical micro-switch. You can install it horizontal or vertically. Another feature is that the outlet can be rotated 90° or 180° with respect to the inlet. This gives you good alternatives in places where space is very limited.

Benefits of the series

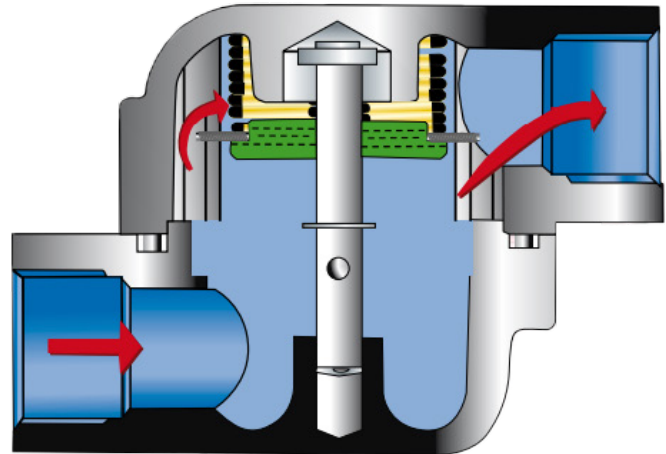
- Rugged and sturdy design
- Insensitive to magnetic fields
- Simple and economical installation
- One adjustable SPDT micro switch for flow alarm
- Can be mounted horizontally or vertically
- Pressure up to 25 bar
- Can be used in any liquid
- Function based on flow and not affected by the static line pressure.

Working Principle



Closed

Inside the Flow Switch there is a spring loaded calibrated disc, which will be lifted by the liquid passing. The shaft holding the disc is mechanically connected to a lever, which will influence the micro switch to trip at a preset flow value.



Open

As soon as the micro switch has tripped a pump to start or open a valve, the flow increases and the possible flow area increases. The increasing flow volume will push the disc to open fully. Max flow passage is only limited by the pump capacity and the applications accepted pressure drop.

As an add to the larger SP-GA we have designed the Eletta SP-G Flow Switch to be able to fit smaller flow and line sizes. This switch also work on the principle of variable flow area where the alarm switch point is allowed to bet set at a very low flow and still the switch is capable of handling large flows without creating a large pressure drop.

The construction also allows horizontal or vertical mounting of the switch as the spring loaded disc will work independent of installation. Another feature is that the outlet can be rotated 90° or 180° with respect to the inlet, according to the application and hence, the Eletta SP-G can be installed in places where space is very limited.

The flow switch have an internal calibrated disc that activates the micro switch at the ordered flow rate and this disc is adjusted before delivery.

Important applications and product features

The Eletta Liquid Flow Switches reliable function has been proven for over 50 years and is of our own design and manufacture. It has been recognized all over the world for its economical and simple construction, which includes the unique lever sealing design, used in our complete Flow Products line including the differential pressure monitors. The switches are used in a variety of tough industrial applications that requires the reliability and sturdiness given by each instrument.

- Dry pump protection
- Low flow alarm in cooling circuits
- Antifreeze protection of heat pump systems
- Protecting heating tool in induction heating machines
- Low cost solution for difficult applications
- Very low flow switching point possible
- Needs no straight runs before or after the switch
- Pre adjusted switch points exclude the need of adjustments in the field

Variation of process connections and materials: Steel, Stainless Steel

Flow range	0 – 3,5 m/s. Max flow limited by pump capacity and acceptable pressure drop	
Min Switch point	1,5 l/min	
Max Switch point	30 l/min	
Wetted Material	Stainless steel 316 and PTFE	
Max. pressure	25 bar (363 PSI)	
Max. temp. Control Unit	-20 - 90°C (-4 - 195°F) std -20 - 120°C (-4 - 248°F) option	
Process connection	DN15 (BSP or NPT 1/2") female	DN20 (BSP or NPT 3/4") male
Enclosure material	Aluminum	
Enclosure protection:	IP43 (NEMA 3R) with cable gland PR18	
Alarm:	one (1) micro switch contact, possible to adjust to trip within the min/max switch point by changing the pressure plate.	
Pressure drop	apx. 0,03 bar/1,5 l/min. (lowest switching point)	
Approvals:	The Eletta Flow Monitors conforms with the EC directive for low voltage (LV) no: 2006/95/EC and electromagnetic compatibility (EMC) no: 2004/108/EC. Complies with applicable parts in PE-Directive 97/23/EC.	
ATEX-version	Explosion Proof Option for SP-G With One SPDT Switch Max 5A @ 250 VAC and 5A @ 30 VDC With 2014/34/EU. With 3 meters cable	

 II 2G Ex h d IIC T6 (85°C) T5(90°C) T4(120°C) - Gb

Certificates



In our manuals you will find full details of the design, pressure drop graphs, measuring ranges and dimensional drawings. Visit www.eletta.com for more information about Eletta and our Products.

